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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,857	11/14/2003	Masaaki Shimokawa	89155.0002	1887

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HOGAN & HARTSON L.L.P.
500 S. GRAND AVENUE
SUITE 1900
LOS ANGELES, CA 90071-2611

EXAMINER

HECKENBERG JR, DONALD H

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,857

Applicant(s)

SHIMOKAWA ET AL.

Examiner

Donald Heckenberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/118,457.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

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was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Pub. No. 2000-108134 (previously of record; hereinafter "JP '134") in view of Chun et al. (U.S. Pat. No. 6,423,252).

JP '134 discloses a foam molding apparatus. The apparatus comprises a concavo-convex pattern on its mold surface for forming the desired pattern on the surface of the molded article (see Figs. 3 & 4). The apparatus further comprises a steam path (5) through a convex portion of the concavo-convex pattern (see Figs. 3 & 4).

Claim 4 presents limitations as to how the claimed core mold is made. Specifically, the claim recites steps using an electronic discharge machining (EDM) process to form the concavo-convex pattern. Normally, the patentability of a product (in this case, the claimed core mold) does not depend on its method of production. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972); In re Pilkington, 411 F.2d 1345,

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1348, 162 USPQ 145, 147 (CCPA 1969); MPEP § 2113. However, the claim also presents the limitation that the product formed by the apparatus has no dimpled portions formed where the protrusions formed by the concavo-convex pattern have not been formed. The disclosure of the instant application sets forth that this is a result of the method of formation of the core mold- that is, the how concavo-convex pattern is imparted to the core mold (see for example, specification at pp. 16-18). As such, the EDM process of manufacture recited in the claim defines a discernable part of the core mold structure in that the surface with the concavo-convex pattern is as such not to form dimpled portions in the product.

JP '134 does not disclose the concavo-convex pattern to be formed by an EDM process, and correspondingly, does not mention the formation of dimpled portions in the product. The use of EDM, however, in the manufacture of molds with concavo-convex patterns for foam molding is suggested by Chun. Chun discloses a mold for making micropatterned form, the pattern including a concavo-convex pattern (see Figs. 1 and 2). Chun notes that a preferable method of forming the pattern is through the use of a electric discharge machining process as such a method is cost effective, accurate, and reproducible (see cl. 10, ll. 20-31). Therefore, it would have been obvious to one of ordinary skill

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in the art at the time of Applicant's invention to have modified the mold disclosed by JP '134 as such to have used an electric-discharge machine process to form the concavo-convex pattern because EDM is cost effective, accurate, and reproducible.

5. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Pub. No. 08-142061 (previously of record; hereinafter "JP '061") in view of JP '134 and Chun.

JP '061 discloses a foam molding apparatus. The apparatus comprises a plurality of adjoining components (11a) to make the molding surface (see Fig. 4). The components are further provided with steam paths (15).

JP '061 further provides a surface material (1), including between the components (see Fig. 4, showing the material 1 between portions 11a at the joints with bolts 14). The material (1) has pores to permit steam to pass (see Abstract). Thus, as the material (1) is located at the joints, and is porous, the apparatus comprises a steam path disposed at the joint of the components.

JP '061 does not disclose the mold surface of the apparatus to be provided with a concavo-convex pattern.

JP '134 discloses a foam molding apparatus as described above. Notably, JP '134 uses a concavo-convex pattern on the

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mold surface, with a steam path located through a convex portion of the pattern, the apparatus thereby as such to impart such a corresponding shape to the molded product (see Figs. 3 & 4).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus disclosed by JP '061 as such to have provided a concavo-convex pattern to the mold surface because this would allow for a corresponding pattern to be formed in the molded product as suggested by JP '134.

As described above, Chun discloses that a preferable method of forming a concavo-convex pattern in a foam mold is through the use of electric discharge machining process as such a method is cost effective, accurate, and reproducible (see cl. 10, 11. 20-31). Thus, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the mold disclosed by JP '061 as such to have used an electric-discharge machine process to form the concavo-convex pattern suggested by JP '134 because an EDM process is cost effective, accurate, and reproducible.

6. Applicant's arguments filed 12 May 2006 have been fully considered but they are not persuasive.

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With respect to the rejection of claim 4 over JP '134 in view of Chun, Applicant argues that in JP '134 "the size and configuration of a steam path disposed on a core mold are arbitrary within the range that beads will not get through the steam path, and in the working example, a width of a steam path and a pitch are described, and a steam path is disposed also on a concave portion of the concavo-convex pattern which was formed on the surface of a core mold. Thus, a steam path mark protruding into the steam path due to expansion during the foaming process will not be uniform." Applicant further argues that "the present invention, by restricting disposition of the steam path onto convex portion of the concavo-convex pattern that is formed on the surface a core mold, a steam path mark on the surface of concave portion of said concavo-convex pattern formed on the surface of a foam-molding article would be uniform, retaining the high-quality of the design pattern." (response, p. 4, ll. 18 - p. 5, l. 2).

In as much as Applicant's argument note difference in features of the product formed by the mold of JP '134, and the process of using the mold of JP '134, these cannot be used to distinguish the claims of the instant application. The claims are directed to the core mold itself, not the foam product molded by the mold. The mold structure itself is determinative

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of patentability, not the features of a product molded by a process using the mold (see discussion above).

It is not seen where the JP '134 reference discloses a steam path on a concave portion of the concavo-convex pattern as Applicant alleges. Figures 3 and 4, for example, show steam paths only on the convex portion of the pattern of the mold. In any event, Applicant's argument is not commensurate with the scope of the claim language as the claims of the instant application do not exclude the preclude the placement of a steam path in concave portions of the pattern. While the claims recite that the steam path is formed on the convex portion, the claims are drafted with open-ended "comprising" terminology, and therefore allow for steam paths to also be formed in other places of the mold, such as the concave portions.

Applicant further argues that the Chun reference is different in that it is merely a technology for forming a concavo-convex pattern. Applicant concludes, therefore, that Chun and the pattern of the present invention are different in a form as well as in a steam path mark.

The test of obviousness is not express suggestion of the claimed invention in any or all references but rather what the references taken collectively would suggest to those of ordinary skill in the art. In re Hedges, 783 F.2d 1038, 1040, 228 USPQ

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685, 687 (Fed. Cir. 1986); In re Rosselet, 347 F.2d 847, 851, 146 USPQ 183, 186 (CCPA 1965). Thus, one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986); In re Keller, 642 F.2d 413, 208 USPQ 847 (CCPA 1981). In this case, the primary features of the claimed mold are disclosed by JP '134 as described above, while Chun is cited for suggesting the use of EDM in the manufacture of the mold. Thus, the fact that Chun does not disclose all of the claimed mold does not render the claimed mold unobvious as Applicant argues.

Applicant notes that JP '134 discloses a different process to form the concavo-convex pattern of the mold. Applicant, therefore, further argues that combining JP '134 with Chun would "change the principle operation of JP '134" (response p. 5, l. 25 and 26.)

Combining the teachings of JP '134 with Chun as described in the rejection would not change any principle operation of the mold of JP '134. The rejection describes why it would have been obvious for one of ordinary skill in the art to chose the alternative method using EDM for manufacturing the mold of JP '134, notably based on Chun suggestion that EDM would be cost effective, accurate, and reproducible. The resultant mold would

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have the same structure as the mold claimed in the instant application as is described above. Nothing suggests the result mold would operate differently than the mold disclosed by JP '134 in forming process the foam products. Moreover, nothing the references indicates why one of ordinary skill in the art would view the Chun method as a viable alternative for manufacturing the mold, regardless of disclosed method by JP '134. The simple fact that the methods are different of manufacture are different does not in and of itself render the combination unobvious to one of ordinary skill of the art when considering the teachings as a whole of the references.

With respect to the rejection of claims 4-6 based on the combination of JP '061, JP '134 and Chun, Applicant argues that the claims of the instant application disclose the steam path marks of concave portion of a surface of the foam molded article, which differs in a manner of forming steam path marks from that of JP '061.

Again it is noted that it is a mold that is being defined in the claims of the instant application, not the foam molded product or the process for forming the article. As such, it is the mold structure which determines patentability. As described in the rejection, the combination of JP '061 with JP '134 suggest a mold with the steam path marks provided on concave

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portions of the forming pattern. Therefore, these references, in combination with Chun, suggest all of the mold structure defined in the claims of the instant application.

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (571) 272-1131. The examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta, can be reached at (571) 272-1316. The official fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<<http://pair-direct.uspto.gov>>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).


Donald Heckenberg
Primary Examiner
A.U. 1722

7-18-6